

## Sheldrake, Sean

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**From:** Sheldrake, Sean  
**Sent:** Friday, January 23, 2015 9:44 AM  
**To:** 'Ryan Barth'; 'PetersonLE@cdm.com'  
**Cc:** Bob Wyatt; Patty Dost; Carl Stivers; Ben Hung; John Edwards; Rick Schwarz; Myron Burr (myron.burr@siltronic.com); igaekwad@davisrothwell.com; 'jpeale@mfainc.org'; bayuk.dana@deq.state.or.us  
**Subject:** RE: Gasco Sediments Site - Notification of Additional DTS Data Collection

Ryan, EPA approves the request to collect additional DTS data and perform a diver inspection of the DTS cable. Please proceed to confer with DEQ and coordinate with EPA regarding the diver so oversight can be available. Also, please provide schedule health and safety submittals at least two weeks in advance of proposed mobilization to avoid delays to field mobilization.

Thank you.

S

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**From:** Ryan Barth [mailto:rbarth@anchorqea.com]  
**Sent:** Thursday, January 22, 2015 5:00 PM  
**To:** Sheldrake, Sean; 'PetersonLE@cdm.com'  
**Cc:** Bob Wyatt; Patty Dost; Carl Stivers; Ben Hung; John Edwards; Rick Schwarz; Myron Burr (myron.burr@siltronic.com); igaekwad@davisrothwell.com; 'jpeale@mfainc.org'  
**Subject:** Gasco Sediments Site - Notification of Additional DTS Data Collection

Sean –

In accordance with the Distributed Temperature Sensing (DTS) Work Plan dated August 25, 2014 and EPA's subsequent conditional approval letter dated September 11, 2014, NWN contractors installed DTS fiber optic cable in the focused investigation area of the Gasco Sediments Site in September 2014. Initial data collection was performed from September 25 to October 15 during both operation and shut-down of the upland hydraulic control and containment (HC&C)

system. Anchor QEA is currently evaluating these data and will present the results in the focused investigation results report identified in the Work Plan following completion of data collection in the focused investigation area. Temperature data from the installed cable continues to be recorded but NWN has not been evaluating the data since mid-October because the river water and surface water temperature differential has been too small to obtain usable data.

Consistent with EPA Comment 12 on the DTS Work Plan, NWN agrees with the collection of additional DTS data to further evaluate its applicability to characterizing groundwater seepage in the focused investigation area during a range of hydrologic conditions. To this end, Anchor QEA has been reviewing the temperature differential between the river water and groundwater and this differential is now sufficient to collect data for evaluation. Review of the historical river water temperatures indicate this temperature gradient will soon begin to decrease (river water warming relative to groundwater), so NWN is initiating a second round of data evaluation using the installed cable. As discussed in the Work Plan, NWN will perform this additional data collection during both operation and shut-down of the HC&C system. NWN will confer with Oregon DEQ on the temporary shutdown and operation of the HC&C system but first wanted to notify EPA of this additional DTS data collection given it is the lead agency for performance of this work.

EPA Comment 10 on the Work Plan requested information regarding diver inspections of the installed cable to ensure the cable burial depth is maintained over an extended period with no data evaluation. NWN acknowledged that request and further explained that the DTS contractor will also perform a pre-measurement check that includes a variety of data evaluations that will determine whether portions of the cable are not appropriately buried. As discussed with CDM Smith, the DTS contractor will perform this pre-measurement evaluation and NWN will also schedule a diver inspection of the cable as an additional means to verify the pre-measurement evaluation. NWN is currently attempting to schedule the diver inspection using the EPA-approved dive contractor that satisfies the EPA diver H&S requirements. Anchor QEA will coordinate this schedule with CDM Smith so EPA has the opportunity to perform oversight of the diver operations. There is a short window of optimal temperature differential so the diver inspection verification may need to occur after data collection begins, pending the diver and EPA oversight availabilities. Regardless, any data collected from portions of the cable that are not shown to be embedded per the Work Plan by either the pre-measurement evaluation or diver inspection will be removed from the data evaluation. Anchor QEA will shortly provide EPA a revised Dive Plan that describes the diver inspection procedures and the dive team qualifications that achieve the EPA requirements.

As soon as time permits, please let me know if EPA has any questions regarding this additional EPA-approved data collection. We will confer with DEQ on temporary shut-down of the HC&C system immediately following your response. Thanks again for your support in this important data collection. Regards.

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